

# *The* **RANGER**

## *Range-Ready High-Speed Digital Camera*



**Rugged.** Specifically designed for test ranges and other harsh environments. 18-gauge steel. Dustproof. Rainproof. Membrane-touch control buttons. Military-style connectors. Lens shield.

**Self-Contained.** Just use standard D-cell batteries and forget about battery belts or power generators. Built-in screen with glare shield. CompactFlash download. Ideal for field use.

**Fast.** Record up to 16,000 frames per second with a 20X electronic shutter.

**Connected.** Communicate between Ranger and your laptop through the USB-2.0 port. IRIG-B is standard.

*Ranger Solves Tough Problems in Tough Environments*

# The RANGER

## SPECIFICATIONS

<b>MODELS</b>	Ranger 250, Ranger 500, Ranger 1000 and Ranger HR.
<b>SENSOR</b>	1280 x 1024 CMOS array, monochrome or color, 8-bit pixel resolution in monochrome, 24-bit pixel resolution in color.
<b>SHUTTER SPEED</b>	1x, 2x, 3x, 4x, 5x, 10x and 20x the recording rate.
<b>RECORDING MODES</b>	<p><b>Manual</b> Begins recording when the record button is pushed. Continues to record and store images in memory until the stop button is pushed.</p> <p><b>Trigger</b> Begins recording when the record button is pushed. Continues to record and store images in memory until an external trigger signal is received. The adjustable trigger position determines how many frames are stored before and after the trigger signal is received.</p>
<b>PLAYBACK RATES</b>	Single step mode plus auto playback at 1, 2, 3, 4, 5, 10, 15, 25, 30, 50, 60, 125, 250, 500 or 1000 frames per second, forward and reverse.
<b>DISPLAY</b>	Built-in 5" LCD color digital display.
<b>CONTROLS</b>	Setup, Function, Select, Record, Stop, Play Forward, Play Reverse, Download, Power On/Off.
<b>I/O CONNECTORS</b>	USB 2.0 Port, Compact Flash, IRIG-B, Trigger, Sync In, Sync Out, Video Out, DC Power.
<b>TRIGGER INPUT</b>	Contact closure or standard TTL signal, 3 to 30 VDC.
<b>SYNCHRONIZATION</b>	Multiple cameras can be synchronized through phase-lock.
<b>SOFTWARE</b>	Includes CamLink camera control software for recording, playback and downloading to a computer. Images are downloaded and saved in .avi file format. Also includes MotionMeasure Software Suite for image playback and analysis. Quickly and easily calculates metrics such as acceleration and velocity.
<b>MOUNTS</b>	Standard C-mount lens mount, 1/4-20 tripod mounts top and bottom. Optional F-mount lens mount.
<b>POWER SUPPLY</b>	Four (4) D-cell batteries or 110/220 VAC adapter.
<b>SIZE &amp; WEIGHT</b>	7.5" W x 7.25" H x 4.25" D; 5.7 lbs. without batteries.

### RANGER 250 500 1000

Recording Rate (fps)	Resolution	Standard Memory - 512MB		Enhanced Memory - 1GB	
		Total Frames	Record Time (sec)	Total Frames	Record Time (sec)
125	640 x 480	2,184	17.5	4,368	34.9
250	640 x 480	2,184	8.7	4,368	17.5
500	640 x 480	2,184	4.4	4,368	8.7
1000	640 x 480	2,184	2.2	4,368	4.4
125	320 x 240	8,736	69.9	17,472	139.8
250	320 x 240	8,736	34.9	17,472	69.9
500	320 x 240	8,736	17.5	17,472	34.9
1000	320 x 240	8,736	8.7	17,472	17.5

### RANGER HR

Recording Rate (fps)	Resolution	Standard Memory - 1GB		Enhanced Memory - 2GB		Maximum Memory - 3GB	
		Total Frames	Record Time (sec)	Total Frames	Record Time (sec)	Total Frames	Record Time (sec)
125	1280 x 1024	1,024	8.2	2,048	16.4	3,072	24.5
250	1280 x 1024	1,024	4.1	2,048	8.2	3,072	12.3
500	1280 x 1024	1,024	2.0	2,048	4.1	3,072	6.1
1000	1280 x 512	2,048	2.0	4,096	4.1	6,144	6.1
2000	1280 x 256	4,096	2.0	8,192	4.1	12,288	6.1
4000	1280 x 128	8,192	2.0	16,384	4.1	24,576	6.1
8000	1280 x 64	16,384	2.0	32,768	4.1	49,152	6.1
16000	1280 x 32	32,768	2.0	65,536	4.1	98,304	6.1
125	640 x 480	4,368	34.9	8,736	69.9	13,104	104.8
250	640 x 480	4,368	17.5	8,736	34.9	13,104	52.4
500	640 x 480	4,368	8.7	8,736	17.5	13,104	26.2
1000	640 x 480	4,368	4.4	8,736	8.7	13,104	13.1
125	320 x 240	17,472	139.8	34,944	279.6	52,416	419.3
250	320 x 240	17,472	69.9	34,944	139.8	52,416	209.7
500	320 x 240	17,472	34.9	34,944	69.9	52,416	104.8
1000	320 x 240	17,472	17.5	34,944	34.9	52,416	52.4
2000	320 x 240	17,472	8.7	34,944	17.5	52,416	26.2